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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,526	08/29/2001	Tadahiro Sorori	Q66003	4709

7590

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EXAMINER

GILLIAM, BARBARA LEE

ART UNIT

PAPER NUMBER

1752

DATE MAILED: 12/18/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/940,526

Applicant(s)

SORORI ET AL.

Examiner

Barbara Gilliam

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on IDS 8/29/01 & Priority 2/5/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-14 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 6, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1752

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 2 is dependent on Claim 1. In Claim 2, the fluoroaliphatic group is derived from a fluoroaliphatic compound obtained by addition polymerizing a tetrafluoroethylene in the presence of an alkyl iodide compound. It is not clear if this method is the telomerization or oligomerization method required in Claim 1. For examination purposes the method of claim 2 is assumed to be the telomerization method.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

Art Unit: 1752

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or  
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

5. Claims 1-4, 7-14, 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawamura et al.

a. In US Patent No. 6,132,931, Kawamura et al teach a positive working photosensitive composition comprising a specific fluorine-containing copolymer (abstract). Kawamura et al teach the addition of three types of fluorine-containing copolymers to the positive working photosensitive composition (column 3, lines 20-27). The first fluorine-containing polymer according is a copolymer having at least three components, which are an addition polymerizable monomer having fluoroaliphatic group, an acrylate, methacrylate, acrylamide or methacrylamide and an addition polymerizable monomer (column 3, lines 35-67). The first fluorine-containing copolymer meets the present limitations for the polymer compound having fluoroaliphatic group on the side chain. The fluoroaliphatic group is required to have at least 40 % by weight, preferably 50 % by weight of carbon-bonded fluorine atoms (column 5, lines 23-26). A mixture of monomers, which are different from one another in the chain length of the perfluoroalkyl group present therein, can be used as the fluoroaliphatic group containing monomer (column 6, lines 31-42). This formula of Kawamura et al meets the present limitations for formula (1) and (2). The mixture of monomers meets the present limitations for claim 8. The amount of the component derived from the fluoroaliphatic group-containing vinyl monomer in the first fluorine-

Art Unit: 1752

containing copolymer is generally from 3 to 70% by weight (column 6, lines 43-47). The first fluorine-containing copolymer generally has an average molecular weight of from 3,000 to 200,000 and is used in a proportion of 0.001 to 10 % by weight based on the total components of the photosensitive composition (column 33, lines 40-48). The photosensitive composition is coated on the support via solvent and dried (column 55, lines 7-11). The support is a dimensionally stable plate-form material such as aluminum. The support may be subjected to a surface graining treatment for conferring water wettability thereon (column 55, lines 25-55). It is desirable that the graining treatment produces an aluminum plate with a center-line surface roughness (Ra) of from 0.3 to 1.0  $\mu\text{m}$ . The grained aluminum plate is then etched. The solution for the etching treatment is selected from aqueous base or acid solutions such as hydrochloric acid (column 56, lines 35-50). In Examples 1A to 5A, each photosensitive plate was exposed for 1 minute to a 3kW metallic halide lamp and developed with an aqueous solution containing  $\text{SiO}_2$  and  $\text{K}_2\text{O}$  in a ration of 1.16 and having  $\text{SiO}_2$  in concentration of 1.4% (column 62, lines 51-57). The developer comprising a small ratio and low concentration of  $\text{SiO}_2$  meets the present limitations for the developer no substantially containing a silicate.

b. Kawamura et al specifically teach using a conventional method to obtain the first-fluorine containing polymer (column 15, lines 36-39). The first fluorine-containing copolymer meets the present limitations for the polymer compound having fluoroaliphatic group on the side chain wherein the fluoroaliphatic group is produced by a telomerization method or oligomerization method because this claim is a product-by-process claim. Applicant is reminded that determination of patentability is based on the

product itself even though the claims are limited by and defined by the process. "If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the product was made by a different process." MPEP 2113.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 7-14, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamura et al in view of Kodama et al.

a. As indicated in the corresponding 35 USC 102(e) rejection, Kawamura et al (US Patent No. 6,132,931) teach a positive working photosensitive composition comprising a specific fluorine-containing copolymer (abstract). Kawamura et al teach the addition of three types of fluorine-containing copolymers to the positive working photosensitive composition (column 3, lines 20-27). The first fluorine-containing polymer according is a copolymer having at least three components, which are an addition polymerizable monomer having fluoroaliphatic group, an acrylate, methacrylate, acrylamide or methacrylamide and an addition polymerizable monomer (column 3, lines 35-67). The first fluorine-containing copolymer meets the present limitations for the polymer compound having fluoroaliphatic group on the side chain.

Art Unit: 1752

b. Kawamura et al do not teach a specific polymerization method used to obtain the first fluorine-containing polymer. Kawamura et al specifically teach using a conventional method to obtain the copolymer (column 15, lines 36-39). In US Patent No. 6,485,883, Kodama et al teach a positive photoresist composition comprising a compound which generates an aliphatic or aromatic carboxylic acid substituted with at least one fluorine atom upon irradiation with an actinic ray or radiation (abstract). The fluorine-substituted carboxylic acid is prepared by a telomerization method or an oligomerization method. Schemes 1 and 2 are illustrative of the telomerization method (column 23, line 51 – column 24, line 20). The synthesis mechanisms of Kodama et al meet the limitations of Kawamura et al for conventional polymerization methods.

c. Therefore it would have been obvious to one of ordinary skill in the art to make a positive working printing plate comprising a grained and etched aluminum substrate and a photosensitive composition comprising three types of fluorine-containing copolymers the first of which comprises an addition polymerizable monomer having fluoroaliphatic group, an acrylate, methacrylate, acrylamide or methacrylamide and an addition polymerizable monomer wherein the first fluorine-containing copolymer is obtained by a conventional polymerization method such as the telomerization or oligomerization method as taught by Kodama et al with reasonable expectation of obtaining a printing plate element with high contrast and a wide development latitude based on the teachings of Kawamura et al (abstract).



Art Unit: 1752

8. The photosensitive composition of US Patent No. 6,110,640 is similar to the photosensitive composition of US Patent No. 6,132,931 with respect to the present application. To avoid multiple, like rejections, US Patent No. 6,110,646 is cited.

9. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goto in view of Kodama et al.

a. In US Patent No. 6,270,940, Goto teaches a laser ablative recording material having on a support a coloring agent layer containing a fluorine-containing surfactant in which the fluorine-containing surfactant is (Condition (1)) a copolymer of either or both of acrylate having a fluoroaliphatic group and methacrylate having a fluoroaliphatic group. The fluorine-containing surfactant can also be (Condition (2)) either or both of poly(oxyalkylene) acrylate and poly(oxyalkylene) methacrylate (abstract). In condition (1), the acrylate having a fluoroaliphatic group,  $C_8F_{17}CH_2CH_2OCOCH=CH_2$ , meets the present limitations for the polymer compound having a fluoroaliphatic group (column 4, lines 11-22). The fluorine-containing surfactant is preferably used in a range of 0.01 to 5 % by weight to the coloring agent (column 6, lines 26-34).

b. According to Goto, the copolymers can be made by copolymerizing under free radical initiation (column 5, lines 19-27). In US Patent No. 6,485,883, Kodama et al teach a positive photoresist composition comprising a compound which generates an aliphatic or aromatic carboxylic acid substituted with at least one fluorine atom upon irradiation with an actinic ray or radiation (abstract). The fluorine-substituted carboxylic acid can be prepared by the telomerization method which involves subjected

Art Unit: 1752

a fluorine-containing vinyl compound to radical polymerization using an alkyl halide.

Schemes 1 and 2 are illustrative of the telomerization method (column 23, line 51 – column 24, line 20).

c. Therefore it would have been obvious to one of ordinary skill in the art to make a laser ablative recording material having on a support a coloring agent layer containing a fluorine-containing surfactant wherein the fluorine-containing surfactant is a copolymer of an acrylate having a fluoroaliphatic group,  $C_8F_{17}CH_2CH_2OCOCH=CH_2$ , wherein the fluorine-containing surfactant is obtained through radical polymerization in the telomerization method as taught by Kodama et al with reasonable expectation of obtaining a recording material with uniform film thickness profile based on the teachings of Goto (abstract).

10. The light sensitive composition of US Patent No. 4,822,713 is similar to the laser ablative recording material of US Patent No. 6,270,940 with respect to the present application. To avoid multiple, like rejections, US Patent No. 4,822,713 is cited.

11. Claims 1-3, 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al in view Kodama et al.

a. In JP 200-187318, Kimura et al teach a positive photosensitive composition for infrared laser beams to be used for directly forming a positive printing plate comprising a material for absorbing light and generating heat, an aqueous alkali-soluble polymer having phenolic hydroxyl groups and a polymer of (meth)acrylate monomer having 2 or 3 3-20 C perfluoroalkyl groups (abstract). The perfluoroalkyl

Art Unit: 1752

(meth)acrylate polymer meets the present limitations for the polymer comprising fluoroaliphatic group. The material for absorbing light meets the present limitations for the light-heat converting agent and the alkali-soluble polymer meets the present limitations for the binder resin. It would have been obvious to one of ordinary skill in the art to make the polymer containing the perfluoroalkyl groups using conventional techniques such as the telomerization or oligomerization technique taught by Kodama et al in US Patent No. 6,485,883. It would have been obvious to coat the positive working printing composition containing the perfluoroalkyl polymer on a dimensionally stable substrate such as aluminum, image the plate with infrared radiation and remove the exposed areas with reasonable expectation of obtaining a positive working printing plate imageable by infrared radiation.

### ***Allowable Subject Matter***

12. Claims 6, 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter:

a. With respect to claims 6 and 16, the printing plates of Kimura (JP 2000-187318) and Kawamura et al (US Patent No. 6,132,931) are positive working meaning there is an increase in developer solubility in exposed areas. The imaging element of Goto (US Patent no. 6,270,940) is laser ablative.

b. With respect to claim 15, Kawamura et al (US Paten No. 6,132,931) do not teach a light-heat converting agent in the photosensitive composition as required in the present application.

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. In US Patent No. 6,110,640, Kawamura et al teach photosensitive composition.

b. In US Patent No. 4,822,713, Nishioka et al teach a light-sensitive composition with fluorine containing acrylate or methacrylate copolymer surfactant.

c. In EP 1 246 012, Tan et al teach a lithographic printing plate precursor.

d. In JP 2002-72474, Sorori et al teach an original plate of planographic printing plate.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara Gilliam whose telephone number is 703-305-1330. The examiner can normally be reached on Monday through Thursday.


a. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on 703-308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Art Unit: 1752

b. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

*B. Gilliam*

B. Gilliam  
December 16, 2002

  
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